WEST Search History

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DATE: Wednesday, March 24, 2004

Hide?	Set Name	Query	Hit Count
	DB=PGPB,USPT,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ		
☐	L1	longo.IN.	680
☐	L2	L1 and clam shell	1
☐	L3	L1 and clam-shell	1
☐	L4	L1 and clamshell	0
☐	L5	L1 and clamshell?	0
☐	L6	longo.IN.	680
☐	L7	longo.IN. and clamshell	0
☐	L8	clamshell and 264/$.ccls.	100
☐	L9	clamshell-type and 264/$.ccls.	8
☐	L10	L8 and prestress$4	1
☐	L11	L9 and prestress$4	0
☐	L12	L11	0
☐	L13	L8 and pretension$4	0
☐	L14	concrete and clam $ and 264/$.ccls.	0
☐	L15	concrete and clamshell$ and 264/$.ccls.	9
☐	L16	L15 and (prestress$4 or pretension$4)	0
☐	L17	concrete and clamshell$.clm. and 264/$.ccls.	1
☐	L18	clamshell$ and 425/$.ccls.	70
☐	L19	L18 and (prestress$4 or pretension$4)	0

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☐	L6	longo.IN.	680
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☐	L8	clamshell and 264/$.ccls.	100
☐	L9	clamshell-type and 264/$.ccls.	8
☐	L10	L8 and prestress$4	1
☐	L11	L9 and prestress$4	0
☐	L12	L11	0
☐	L13	L8 and pretension$4	0
☐	L14	concrete and clam $ and 264/$.ccls.	0
☐	L15	concrete and clamshell$ and 264/$.ccls.	9
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DATE: Wednesday, March 24, 2004

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PALM INTRANET

Day : Wednesday
Date: 3/24/2004
Time: 14:05:33

Inventor Name Search Result

Your Search was:

Last Name = LONGO
First Name = ADRIEL

Application#	Patent#	Status	Date Filed	Title	Inventor Name 1
09812595	Not Issued	071	03/21/2001	PRESTRESSED CONCRETE CASTING APPARATUS AND METHOD	LONGO, ADRIEL EMILIO

Inventor Search Completed: No Records to Display.

Search Another: Inventor

Last Name: longo
First Name: adriel
Search

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		DB=PGPB,USPT,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ	
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☐	L3	L2 and (prestress$4 or pretension$4)	0
☐	L4	L2 and concrete.clm.	0
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☐	L6	concrete same clamshell$ same(prestress$4 or pretension$4)	0
☐	L7	concrete same clamshell$ same(prestress$4 or pretension$4)	0
☐	L8	concrete same clamshell$ and(prestress$4 or pretension$4)	0
☐	L9	concrete and clamshell$ and(prestress$4 or pretension$4)	4
☐	L10	concrete and clamshell$ and (prestress$4 or pretension$4)	4

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L10: Entry 4 of 4 File: USPT Nov 30, 1971

DOCUMENT-IDENTIFIER: US 3624702 A
TITLE: OFFSHORE PLATFORM SUPPORT

Abstract Text (1):
A column formed of annular segments made of reinforced concrete, having longitudinal holes therethrough in which prestressing tendons are installed, is utilized to support an offshore-drilling platform. Holes in outwardly extending ribs or wings of the top and bottom segments guide the piles into the sea floor, while being driven. The piles are cut off at the top of the outwardly radial ribs of the lower segment. In the larger sizes, the bottom segment is provided with a floor having holes with removable plugs, for inflow of sea water to sink the column at the installation site. Holes provided with removable plugs adjacent the bottom of the column permit the column to be used for separating a mixture of oil and sea water and sand. Such columns may also be used for oil storage purposes. Larger platforms, such as consisting of a number of similar platform components, may be supported by two or more columns.

Brief Summary Text (1):
This invention relates to supports for offshore platforms useful in the drilling of oil or gas wells, and the like, and particularly offshore platform supports which are formed partially or primarily of prestressed concrete and the like.

Brief Summary Text (3):
Among the objects of this invention are to provide a novel offshore platform support which is particularly adapted for intermediate water depths; to provide such a platform support, two or more of which may be utilized to support platforms of different areas; to provide such a platform support which may be used for oil storage; to provide such a platform support, the interior of which may be utilized to separate oil, water and/or sand mixtures; to provide such a platform support which minimizes the amount of underwater work required during erection or installation; to provide such a platform support which facilitates the drilling of wells from the platform; to provide such a platform support which facilitates the installation of piling for attachment of the platform support to the seabed; to provide such platform supports which may be formed primarily of prestressed concrete and consisting of segments which may be precast and stressed together, or may be made by slip forming, either on shore of off shore; to provide such platform supports which may be made on shore and readily floated to the erection site; and to provide such platform supports which are effective and efficient in use .

Detailed Description Text (4):
The bottom segment B, as in FIG. 2, is provided with a closed bottom 30, which may be slightly thicker than the sidewall 31, while a series of webs 32, on the inside of the segment, are formed as extensions of the respective outside ribs 20, for placement of lower, diametrical tendon tubes 33 and inverted arcuate, upper tendon tubes 34, a pair of each extending through each pair of aligned ribs 20 and corresponding webs 32. The tendons placed in tubes 33 and 34 are utilized in prestressing the ribs and webs, as in the manner described below, while vertical prestressing of the segments may be accomplished by tendons installed in vertical

tendon tubes 35 in wall 31, as in FIGS. 5 and 7. The bottom 30 may be provided with a series of holes 36 for risers and conduits from the wells, with each hole 36 being closed in any suitable manner, as by a removable plug 37 of FIG. 3, which plug may be removed for use of the respective hole.

Detailed Description Text (5):
The piles 23 are preferably driven prior to the addition of the truss structure 11 and platform 10, as from a suitable barge, each being of sufficient length to be inserted through one of the upper holes 25 and down into the corresponding lower hole 22. After the piles have been driven to a suitable depth, they are grouted to the block 21, as by grout 38 of FIG. 4, which may be placed by scuba divers. The pipe may also be filled with concrete up to the top of block 21 and the pipe then cut off to produce stub piles, as by a shaped explosive charge inside or outside the pipe, along the dotted line 39, at or slightly above the top of block 21.

Detailed Description Text (7):
The top segment T is provided with a series of radial webs 46 inside wall 31, in alignment with the respective wings 24, as in FIG. 8. A series of upper reinforcing bars 47 and lower reinforcing bars 48, as in FIG. 9, may extend through each aligned pair of webs and wings, with upright stirrups 49 connecting the upper and lower reinforcing bars. The upper and lower reinforcing bars may be curved around the outside of pile holes 25. Connection plates 50 for the prestressing tendons may be cast in the bottom segment B, at the lower ends of tendon tubes 35, as in FIG. 3, with conical recesses 51 provided for access to the tendon connections, and similar plates 50' and recesses 51' at one end of each pair of tendon tubes 33 and 34. Conical recesses 52 may also be provided in the top of top segment T, as in FIG. 9, at the upper end of each tendon tube 35, to receive conical clamping devices, as hereinafter described. A recess 53, for the same purpose, may be provided at the opposite ends of tendon tubes 33 and 34, as in FIG. 3.

Detailed Description Text (8):
The segments of the support S may be precast on shore or on a barge near the site of the tower, as in a form having a configuration corresponding to the segment cast. The intermediate segments I may be cast in an annular form, while special forms may be provided for the bottom segment B and the top segment T, although the same form used for the intermediate segments may be adopted for casting the upper and lower segments, as by slots which may be closed for casting the intermediate segments but to which suitable auxiliary forms may be attached for forming wings 24 on the outside and webs 46 on the inside of the top segment, or ribs 20 and blocks 21 on the outside and webs 31 on the inside of the bottom segment. The bottom segment may be cast in inverted position, for easier casting of the ribs 20. However, when more than one support S is to be made, it may be more convenient to use one form for casting the bottom segment, another form for casting the top segment and still another form for casting each of the intermediate segments. The tendons for prestressing the reinforced concrete may be inserted in the respective tendon tubes at an appropriate time, such as between 2 days and 4 days after the concrete has initially set, depending upon when the concrete reaches a predetermined compressive strength. The prestressing tendons in tubes 35 may be stressed against plates 50 and against plate 51 for the tendon tubes 33 and 34 of the bottom segment, by the use of conical guides and washers, or by a sleeve and split cones, followed by grouting in the tendon tubes, as in the manner described in my copending application Ser. No. 712,187, filed Mar. 11, 1968, now U.S. Pat. No. 3,483,707. After the tendons are installed, the recesses 51, 51', 52 and 53 are filled with grout.

Detailed Description Text (9):
Assuming that the segments are precast on shore, the cast segments are placed on a barge and towed to the erection site, being prestressed during towing. The segments thus are preferably transported in end to end position, so that the tendons in tubes 35 can be inserted through all of the segments. After prestressing and

curing, the support S may be lowered by a barge crane in vertical position into the water, or merely slid off one side or from the end of the barge. As the support enters the sea, one or more of the plugs 37 for holes 36 may be removed, or provided with a valve which may be opened, to admit sea water into the interior of the column, to sink it slowly as it is adjusted into position. The area of the ocean floor 15 on which the lower segment is to rest may first be leveled off, as by a clamshell bucket or a pressure hose. If there is any tidal action at the point, an excavation may be made to receive the bottom segment, in order to prevent shifting sand from being removed beneath any portion of the bottom segment, particularly the ribs 20. After the support S has been placed in position, the holes 25 of the top segment being in alignment with the holes 22 in the bottom segment, the piles 23, originally sufficiently long to be driven to depth and still extend above the upper wings 24, are inserted, in turn, through the respective upper hole 25 and bottom hole 22, then driven to the desired depth, after which the piles are grouted and cut off at the tops of blocks 21, as indicated previously. After the piling has been driven and the column secured to the bottom of the sea, any sea water inside the column, used for sinking purposes, may then be pumped out, if necessary. The inside of the column below the lower deck 26 may be used for oil storage purposes, if desired.

Detailed Description Text (12):
From the foregoing, it will be evident that the requirements and objects hereinbefore set forth are fulfilled to a marked degree. In the embodiment described, the piles are accurately guided, during driving, and are connected to the column in such a way as to firmly affix the column to the sea bed. In the embodiment, the resistance of the column to bending stresses is enhanced by the prestressing tendons which are stressed to a desired degree of tension in the tendon tubes. Thus, forces due to water or wave action which may tend to bend the column must first overcome the compression in the concrete walls of the column caused by tension of the prestressing tendons, before any of the segments are subjected to tension stresses. In the installation of the supports and platforms, the amount of underwater work required is held to a minimum, since no welding or similar time-consuming operations need be carried out at great depths. In the embodiment, the preparation of the sea floor by sluicing hoses does not require the divers to be at the bottom for extended periods of time. Also, the grouting of the individual piles to the ends of the radial ribs shown in FIG. 1 does not require a diver to be at the bottom for an extended length of time, since each pile may be grouted after being driven, and the time required to drive the next pile permits the diver to return to the surface. Also, the piles are accurately guided during driving, although eventually cut off near the bottom. As will be evident, cutoff sections of pile may be welded together to form longer sections for other piles. The segments of the columns are readily cast, with appropriate reinforcement inside the concrete. The column may be used for the storage of oil and also, through drainage holes provided near the base of the column, to separate mixtures of oil and sea water and sand, which are frequently produced from offshore wells. Although reference is made herein to the sea level and sea bottom, it will be understood that the platform supports and platforms of this invention may be installed in fresh water lakes.

Other Reference Publication (1):
Prestressed Concrete Cylinder Piles, Raymond International, Inc., New York, N.Y., p. A26-3, received in Patent Office-Oct. 19, 1959. Copy in Class 61, Subclass 56.

CLAIMS:

1. An offshore-drilling platform support for installation in a body of water, comprising:

an upright column including a series of connected, hollow segments, each having a reinforced concrete wall and a series of longitudinal holes in said walls for

accommodating prestressing means;

a series of at least three radiating base supports extending radially from the bottom segment and constructed and arranged to engage the floor of said body of water;

a corresponding series of radiating platform supports extending radially from the uppermost segment and constructed and arranged for mounting of a platform thereon; and

said bottom base supports and the corresponding top platform supports being in vertical alignment and having upright, vertically aligned holes for receiving and guiding a plurality of piles to be driven into said floor of said body of water.

4. An offshore-drilling platform support, as defined in claim 3, wherein:

said joints comprise a lower, inner, generally horizontal land, a higher, outer, generally horizontal land and a bevel connecting said lands, said bevel extending across said holes for accommodating said prestressing means.

7. An offshore-drilling platform support, as defined in claim 5, wherein:

said ribs and webs of said bottom segment comprise an even number;

a lower hole extends from the outside of each said block through the corresponding rib and inside web, and the opposite web and rib;

a series of arched, upwardly curved holes extend from the outside of each block adjacent the lower end thereof upwardly through said block and the corresponding rib and into the corresponding web, thence downwardly through the opposite web and rib to the opposite block; and

prestressing means are disposed in said holes.